

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of the Claims:**

Claim 1 (currently amended): A method for determining location of a short in a circuit, comprising the steps of:

- (a) running a connectivity extract tool on an artwork of the circuit;
- (b) determining if a short exists in the circuit, wherein if a short exists the method

comprises:

running a short locator tool, comprising

examining a schematic of the circuit, where in the examining includes evaluating a connectivity text file of the schematic and obtaining electrical connection information for each component in the circuit,

creating a copy of the artwork of the circuit,

the short locator tool inferring labels to the copy of the artwork; and

obtaining a shortest path between conflicting labels in the circuit,

wherein the shortest path contains the short in the circuit; and

- (c) comparing the artwork of the circuit to a schematic of the circuit.

Claims 2-4 (canceled).

Claim 5 (previously presented): The method of claim 1 wherein the step of inferring further comprises the step of renaming signal names.

Claim 6 (previously presented): The method of claim 1 further comprising the step of running the connectivity extract tool on the copy of the artwork.

Claim 7 (canceled).

Claim 8 (previously presented): The method of claim 1 further comprising modifying artwork of the circuit.

Claim 9 (original): The method of claim 8 further comprising running the connectivity extract tool on the modified artwork.

Claim 10 (currently amended): A method for determining shortest path for a short in a circuit comprising the steps of:

examining a schematic of the circuit, where in the examining includes evaluating a connectivity text file of the schematic and obtaining electrical connection information for each component in the circuit;

creating a copy of the artwork of the circuit;  
inferring labels to the copy of the artwork using a short locator tool; and  
obtaining a shortest path between conflicting labels in the circuit, wherein the shortest path contains the short in the circuit.

Claims 11-12 (canceled).

Claim 13 (original): The method of claim 10 wherein the step of inferring further comprises the step of renaming common connection signal names.

Claim 14 (original): The method of claim 10 further comprising the step of running a connectivity extract tool on the copy of the artwork.

Claim 15 (canceled).

Claim 16 (currently amended): The method of claim 16 further comprising modifying artwork of the circuit.

Claim 17 (original): The method of claim 16 further comprising running the connectivity extract tool on the modified artwork.

Claim 18 (canceled).

Claim 19 (previously presented): A method comprising:

running a connectivity extract tool on an artwork of a circuit to determine if a short exists in the circuit;

if the short circuit exists, determining a location of the short circuit by:

evaluating a schematic text file associated with the circuit to identify each connection in the circuit;

creating a copy of the artwork of the circuit;

inferring and renaming labels, associated with each identified connection, in the copy of the artwork; and

running the connectivity tool on the copy of the artwork to identify a shortest electrical path between two conflicting inferred and renamed labels, wherein the short circuit exists in the identified shortest electrical path.

Claim 20 (previously presented): The method of claim 19, further comprising:

isolating a portion of the copy of the artwork containing the conflicting labels to determine the location of the short circuit.

Claim 21 (previously presented): The method of claim 20, wherein the isolated portion of the copy of the artwork contains the short circuit.

Claim 22 (previously presented): The method of claim 21, further comprising:

modifying the isolated portion of the copy of the artwork to remove the short circuit.

Claim 23 (previously presented): The method of claim 22, further comprising:  
    running the connectivity tool on the modified portion of the copy of the artwork to  
verify that the short circuit has been removed.